

IN THE CLAIMS:

Please amend the claims as follows:

1-17. (Cancelled)

18. (Currently amended) A method of positioning a mobile station in a cellular network including a controlling base station and a plurality of positioning elements each of which is capable of generating a positioning signal, wherein a said controlling base station controls communications within a cell and wherein said controlling base station performs the steps of:

C1 generating and transmitting a positioning instruction signal informing in a downlink communication with to a mobile station, said positioning instruction signal identifying an expected time of arrival the identities and windows for detection of said positioning signals by said mobile station;

paging said plurality of positioning elements within the cell thereby causing said plurality of positioning elements to generate and transmit said positioning signals, each said positioning signal comprising information identifying the positioning element which transmitted said positioning signal;

and

receiving a report from the mobile station in its an uplink communication on the results of detection of said positioning signals by said mobile station.

19. (Currently amended) A method of positioning a mobile station as in claim 18 in which, ~~where~~ when the reported results of detection indicate that said mobile station did not receive said positioning signal transmitted by a given positioning element are

insufficient, the given positioning element is instructed by said base station to retransmit said positioning signal at a higher power level ~~elements are reconfigured by the base station by re-paging of a positioning element~~ within a predetermined time.

20. (Currently amended) A method of positioning a mobile station as in claim 19, wherein ~~in which the reconfiguration comprises~~ the positioning element ~~re-transmitting~~ retransmits its positioning signal at the next allotted time with a power level increased by a predetermined amount.

21. (Currently amended) A positioning element for use in positioning mobile stations communicating with a controlling base station of a cellular network via an air interface and in which the positioning element;

synchronizes with downlink transmissions of the controlling base station, and transmits positioning signals with predetermined delays in relation to at ~~predictable times following receipt of~~ certain instances of a paging signal ~~signals~~ transmitted from the controlling base station, said positioning signals comprising information identifying the positioning element.

22. (Currently amended) A positioning element for use in positioning mobile stations communicating with a controlling base station of a cellular network via the air interface and in which the positioning element;

synchronizes with downlink transmissions of the controlling base station, and transmits positioning signals periodically at predetermined times relative to the

time of detection by said positioning elements of a signal or part of a signal transmitted by said base station, and without instruction by said base station, said positioning signals comprising information identifying the positioning element.

23. (Previously presented) A positioning element as in claims 21 or 22 for use in a CDMA cellular network and in which the positioning signals comprise spreading codes uniquely associated with each positioning element.

C/ 24. (Currently amended) A mobile station for communicating with a cellular network comprising a controlling base station and a plurality of positioning elements each of which is capable of generating a positioning signal, and in which the mobile station synchronizes with downlink transmissions from a said controlling base station and detects positioning signals transmitted from positioning elements synchronized to said downlink transmissions, and

wherein the timing window for the expected time of arrival timing intervals and character of the positioning signals to be detected are signalled transmitted to the mobile station from the controlling base station in advance of receipt of the positioning signals at the mobile station, each positioning signal comprising information identifying the positioning element which transmitted said positioning signal.

25. (Currently amended) A mobile station as in claim 24 operating with a CDMA cellular network in which the results of detection of positioning signals are reported to

the controlling base station in uplink communication between said mobile station and
with the base station.

26. (New) A positioning element in accordance with claim 21, wherein said
positioning element does not transmit any information to said controlling base station.

27. (New) A positioning element in accordance with claim 22, wherein said
positioning element does not transmit any information to said controlling base station.
